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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/763,807	06/15/2001	Michael Vincent Lewis	021238-437	3685

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EXAMINER	
JARRETT, RYAN A	

ART UNIT	PAPER NUMBER
2125	17

DATE MAILED: 12/31/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/763,807	LEWIS ET AL.	
	Examiner	Art Unit	
	Ryan A. Jarrett	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6,8-16,18-29,31-43 and 45-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,8-16,18-29,31-43 and 45-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-6, 8-16, 18-29, 31-43, and 45-50 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Independent claims 1, 19, 35, 47, and 48 recite that the plurality of devices are selected from the group consisting of, in part, "variable speed drives for a picker/winnower" **and** "other devices not used in the motion control of the tipper and the rod maker". However, it appears that these limitations are in direct conflict with one another since a "variable speed drive" can be considered a motion control device. The remaining claims depend from these independent claims and thus incorporate the same deficiencies.

Additionally, regarding independent claim 19, it is unclear how the second controller communicates input data from an operator to the second controller.

Additionally, dependent claim 31 recites the limitation "the motion controller" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Additionally, dependent claim 37 recites the limitation "the second controller" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Additionally, dependent claim 40 recites the limitations "the stop signal" and "the second controller" in line 2. There is insufficient antecedent basis for these limitations in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 11-16, 18-27, 35, 36, and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by Beasley et al. U.S. Patent No. 4,827,423. Beasley et al. discloses a cigarette manufacturing apparatus comprising: a tobacco rod maker for making double length tobacco rods; a tipper for applying filters to tobacco rods to form filter tipped cigarettes; a transfer apparatus for transferring double length tobacco rods from the rod maker to the tipper (e.g. Fig. 3 reference number 240, Fig. 13 reference numbers 550 and 554, col. 64 lines 21-64); wherein each of the tipper and the rod maker comprises a plurality of devices for monitoring and a plurality of devices for affecting parameters of the rod maker, the tipper and/or the cigarettes being manufactured, said plurality of devices being selected from the group consisting of blocks of sensors, pneumatic valves, variable speed drives for a picker/winnower, large and small fans and tobacco return, glue area sensors, pneumatic valve clutches, pneumatic auto cleaning valves, and other devices not used in the motion control of the tipper and the rod maker, each of said devices comprising an embedded processor or

interface that codes information for transmission and decodes messages the device receives, and wherein one or more of said monitoring devices and said parameter affecting devices both monitors and affects parameters (e.g. col. 65 lines 22-35, col. 66 lines 3-68, col. 9 line 45 – col. 10 line 25, col. 11 line 33 – col. 12 line 37); a first controller for controlling the plurality of devices on the tipper and the rod maker, including varying one or more parameters of the rod maker, the tipper and/or the cigarettes being manufactured, in response to conditions monitored by one or more of said devices (e.g. Fig. 3 reference numbers 168-169' and 230, col. 64 line 65 – col. 65 line 17); a field bus, the plurality of devices and the controller each being connected to the field bus (e.g. Fig. 3 reference number 240); monitoring the field bus from the controller for data from the devices; and automatically adjusting one or more parameters of the tipper or rod maker in accordance with the information content of the data received (e.g. col. 66 line 14 – col. 67 line 17); a second controller coupled to the first controller and including at least one HMI for providing tipper, rod maker and cigarette information to an operator and for communicating input data from the user to the first controller (e.g. Fig. 3 reference numbers 168-169' and 230, col. 64 line 65 – col. 65 line 17);

further comprising at least one human-machine interface (HMI) connected to the field bus; wherein the at least one HMI comprises a rod maker HMI and a tipper HMI, each of the rod maker HMI and the tipper HMI being connected to the controller via the field bus; wherein the at least one HMI is connected to a communications network; further comprising at least one human-machine interface (HMI) connected to the

controller; wherein the at least one HMI comprises a rod maker HMI and a tipper HMI, each of the rod maker HMI and the tipper HMI being connected to the controller; wherein at least one of the plurality of devices is connected to the field bus via an interface; wherein at least one of the plurality of devices transmits data including diagnostic data to the controller over the field bus (e.g. col. 9 line 45 – col. 10 line 25, col. 11 line 33 – col. 12 line 37, col. 64 line 8 – col. 67 line 61, Fig. 3 reference numbers 168-169' and 230 and 240, Fig. 13);

wherein the second controller comprises a tipper controller communicating with a tipper HMI and a rod maker controller communicating with a rod maker HMI; wherein the tipper controller and the rod maker controller each comprises a PC; wherein the tipper controller and the rod maker controller each comprises an HMI; wherein the tipper controller and the rod maker controller are interconnected; wherein the first controller and at least some of the rod maker and tipper devices are connected to a field bus; wherein the second controller is connected to the field bus; wherein the second controller is connected to an external communications network (e.g. col. 9 line 45 – col. 10 line 25, col. 11 line 33 – col. 12 line 37, col. 64 line 8 – col. 67 line 61, Fig. 3 reference numbers 168-169' and 230 and 240, Fig. 13).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 2-6, 10, 28, 29, 31, 43, 45, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beasley et al. as applied to claims 1, 19, and 35 above, and further in view of Arthur et al. U.S. Patent No. 4,463,766. Beasley et al. discloses that the cigarette manufacturing system comprises a plurality of motors controlled by a controller (e.g. col. col. 9 line 45 – col. 10 line 25, col. 11 line 33 – col. 12 line 37). Beasley et al. does not go into specific details about the motors being synchronized; wherein the plurality of motors includes a cut-off motor for driving a device for cutting individual tobacco rods, a suction chamber motor for driving a suction belt, a garniture belt drive motor, and a hopper motor for controlling the rate at which tobacco is drawn from a hopper; wherein the rotational speed of the suction chamber motor, the garniture belt drive motor and the hopper motor are synchronized to the rotational speed of the cut-off motor; wherein the plurality of motors further includes a tipper motor for driving a tipper drum train, wherein the tipper motor is synchronized to the position of the cut-off motor; wherein the synchronized motors include motors synchronized by speed and motors synchronized by position.

However, Arthur et al. discloses a cigarette and cigarette filter making machine comprising a plurality of motors that includes a cut-off motor for driving a device for cutting individual tobacco rods, a suction chamber motor for driving a suction belt, a garniture belt drive motor, and a hopper motor for controlling the rate at which tobacco is drawn from a hopper; wherein the rotational speed of the suction chamber motor, the garniture belt drive motor and the hopper motor are synchronized to the rotational speed of the cut-off motor; wherein the plurality of motors further includes a tipper motor

for driving a tipper drum train, wherein the tipper motor is synchronized to the position of the cut-off motor; wherein the synchronized motors include motors synchronized by speed and motors synchronized by position (e.g. col. 3 line 60 – col. 4 line 30). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Beasley et al. with Arthur et al. in order to coordinate the various machine parts as taught by Arthur et al. (e.g. col. 2 lines 5-42).

7. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beasley et al. as modified by Arthur as applied to claim 5 above, and further in view of Wilkinson et al. U.S. Patent No. 5,902,431. Beasley et al. as modified by Arthur et al. discloses an ecreteur motor for driving a dense end cam and a pair of ecreteur discs, and a printer motor for driving a printer to print onto the cigarette wrapping paper; wherein the ecreteur motor and the printer motor are speed and position synchronized to the cut-off motor (e.g. col. 3 line 60 – col. 4 line 20 of Arthur et al.). Beasley et al. as modified by Arthur et al. does not appear to disclose a bobbin changer capstan motor. However, Wilkinson et al. discloses a composite web forming apparatus comprising a bobbin changing motor that is synchronized to the speed of the filter attachment motor (e.g. col. 4 lines 40-55). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Beasley et al. as modified by Arthur et al. with Wilkinson et al. in order to synchronize bobbin changing with other motor functions in a cigarette processing machine, as taught by Wilkinson et al.

8. Claims 32-34, 37-42, 49, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beasley et al. as applied to claims 11, 20, 35, and above. Regarding

claims 37-42, Beasley et al. does not specifically disclose sending a stop signal to the field devices based on various fault or emergency conditions. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Beasley et al. in this fashion since it is well known to communicate fault information of this kind in a manufacturing operation (including cigarette manufacturing operations) so that the fault can be identified and repaired quickly and so that waste can be avoided.

Regarding claims 32-34, 49, and 50, Beasley et al. does not specifically disclose that the HMI is configured to display to the operator one of a hierarchical set of display screens; wherein at least one of the set of screens includes rows areas representing buttons for controlling rod maker or tipper functions. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Beasley et al. to include these features since it is well known in the art to use these types of display screen configurations to control machine functions in a manufacturing process. Touch screens and multiple display screens facilitate operator interaction with a manufacturing process.

9. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over Beasley et al. as applied to claim 35 above, and further in view of Lorenzen U.S. Patent No. 3,720,815. Beasley et al. does not appear to disclose that the machine controller looks for a signal on the field bus indicating that a wrapping paper bobbin or a tipping paper bobbin is nearly exhausted and, if the signal is detected, initiates a routine to splice a fresh paper bobbin onto the present paper bobbin. However, Lorenzen discloses a

machine controller looks that looks for a signal indicating that a wrapping paper bobbin or a tipping paper bobbin is nearly exhausted and, if the signal is detected, initiates a routine to splice a fresh paper bobbin onto the present paper bobbin (col. 10 line 55 – col. 11 line 14). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Beasley et al. with Lorenzen since Lorenzen teaches that a detection system such a this can prevent excessive losses in output or damage to machine parts (col. 2 lines 10-36).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan A. Jarrett whose telephone number is (703) 308-4739. The examiner can normally be reached on 10:00-6:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (703) 308-0538. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Ryan A. Jarrett
Examiner
Art Unit 2125

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100